

# Do you own your network, or does it own you?

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# Objectives

- Describe a step-by-step process for maximizing the return you gain from your IT investment
- Focus on medium-sized enterprises, school districts, county/municipal government

# Approach

- Discuss tactical versus strategic network management
- Review examples from recent Client
- Highlight techniques for addressing or avoiding identified issues

# Tactical IT management is characterized by:

- Resources consumed by day-to-day issues
- Higher risk of system outage due to controllable issues
  - Facilities
  - Staffing
  - Upgrades
- Higher total cost of operations
- IT viewed as necessary evil

# Strategic IT management is characterized by:

- IT resources contribute to organizational goals
- System outages rare, one-time events
- Lower total cost of ownership
- Up to date IT strategic plan
- Focus on strategic applications: What can we do next to improve the way we deliver service?

# One Client Experience

- Network infrastructure a mess
  - Cabling plant evolved without documentation
  - Installed by volunteers, uncertified technicians
  - Cabling neither tested or warrantied
  - Extended by repeaters
- UPS batteries already failed
- No name PCs as Servers
- Shareware firewall, e-mail applications
- Obsolete client H/W, S/W

# Where do you start?

- Cabling plant
- Pathways and Spaces
- Core servers, devices and switches
- Network Topology
- Staff
- Applications
- WAN & Internet Bandwidth
- Support resources

# Replace or Upgrade Cabling Plant

- Compliant with EIA/TIA Standards
- Installed by Manufacturer-certified technicians
- Tested for compliance
- Backed by Manufacturer warranty
- Installed in accessible pathways
- Protected from environmental, electrical threats
- Category 5e is a MINIMUM, even for voice



# Pathways and Spaces

- Telecommunications rooms, not closets
- Secured, well lit, single purpose
- Clean, redundant power
- Adequate cooling w/ redundancy
- Accessible cabling pathways that provide adequate support, room for growth

# Core Servers, Devices and Switches

- Build to Plan: Know where you're going
- Enterprise grade
  - Support available in-house and out
  - Able to grow with your system
- Selection based on competitive evaluation
- Standards rather than proprietary protocols
- Future-proof

# Network Topology

- Partition before you have to
- Anticipate VoIP, Video, Building Controls, ...
- Router/switch fabric in place before you need it
- Plan for growth in LAN, WAN, internet needs
- Isolate bandwidth hogs: GIS, Medical Imaging, Voice, Video ...

# Client devices

- Standardize
- Plan for replacement
- Plan for increased mobility, functionality
- Plan for policy, patch enforcement

# Staff improvement

- Cross train: make staff redundant
- Require continuing education
- Encourage independent or multi-vendor certification
- Support participation in trade groups

# Applications

- One OS version
- Plan for upgrades
  - Not too soon or last minute
  - Driven by business case
  - Pilot projects first
- Enterprise applications, COTS when possible
- Well supported in-house and locally

# WAN & Internet Bandwidth

- Carrier AND Path Redundancy
- Reliability
- Plan for Growth
- Cost Effectiveness
- Consider alternative technologies

# Support Resources

- Factor availability and quality of outside support into procurement decisions
- Develop contingency plans for support
- Develop peer relationships for additional support resources



## Isn't this expensive?

- Total Cost of Ownership is the measure
- Reliable infrastructure allows resources to be focused on exploiting IT for net gain
- Competitive procurements using RFP can significantly lower cost
- Thoroughly evaluate single-label vs. best-of-breed strategies
- Reliable infrastructure avoids hidden costs of new applications: VoIP, Video,...

# Other Things to Watch For

- Convergence
- Increasing demand for mobility, in and outside of the office
- Competitive WAN solutions from non-traditional providers

# Conclusions and Questions

- Defined strategic versus tactical IT management
- Presented a step-by-step process for maximizing positive effect of IT investment
- Identified strategies for controlling cost impacts